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09/896,778	06/29/2001	Sharon E. Minder	BOC920000047US1	8891

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EXAMINER
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FLEURANTIN, JEAN B

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 07/01/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/896,778

Applicant(s)

MINDER ET AL.

Examiner

Jean B Fleurantin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on RCE 27 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 27 April 2004 has been entered. Claims 1-36 remain pending for examination.

### ***Response to Arguments***

2. Applicant's arguments filed 27 April 2004 have been fully considered but, have been found persuasive to the extent that the prior art of record does not specifically disclose "assembling a query string from the first plurality of elements, the query string comprising a database query command to be executed by a database search engine". However, Suganuma discloses such limitations.

### **MPEP 2111 Claim Interpretation; Broadest Reasonable Interpretation**

During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification" Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). The court found that applicant was advocating ... the impermissible importation of subject matter from the specification into the claim. See also In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held

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that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the “PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definition or otherwise that may be afforded by the written description contained in application’s specification.”).

The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. In re Cortright, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999).

***Claim Rejections – 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

I.)

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

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reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 35 and 36 are rejected under 35 U.S.C. 102(e) as anticipated by U.S. Patent No. 6,671,681 issued to Emens et al. ("hereinafter Emens").

As per claim 35, Emens discloses "a computer-readable medium having stored thereon a data structure" (see col. 4, 39-44), and figure 3:

"a name of a first table that includes data to be processed", (see col. 6, lines 31-33); and

"a name of query element a second database table that includes arguments to be used in composing a database command to process the data", (see col. 6, lines 40-42).

As per claim 36, Emens discloses, "wherein the data structure further includes identification of an SQL command to be used in processing the data", (see col. 7, lines 16-24).

II.)

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 35 and 36 are rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 5,940,819 issued to Beavin et al. ("hereinafter Beavin").

As per claim 35, Beavin discloses "a computer-readable medium having stored thereon a data structure: a name of a first table that includes data to be processed" as generation of the query plan and selection of an access path involves processor consideration of both the available access paths 'indexes, sequential reads' and system-held statistics on the data to be accessed 'the size of the table, the number of distinct values in a particular column' to choose what the

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RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers, (see col. 10, lines 50-64); and

“a name of query element a second database table that includes arguments to be used in composing a database command to process the data” as SQL provides table operations with which users can request database information and form one or more new tables out of the operation results, data from multiple tables, or views, can be linked to perform complex sets of table operations with a single statement, the tables operations are specified in SQL statements called queries, (see col. 1, lines 25-30).

As per claim 36, Beavin discloses, “wherein the data structure further includes identification of an SQL command to be used in processing the data”, (see col. 12, 61-63 lines 15-16).

[Remainder of page intentionally left blank]

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,940,819 issued to Beavin et al. ("hereinafter Beavin") in view of U.S. Patent No. 6,704,748 issued to Suganuma ("hereinafter Suganuma").

As per claims 1, 16 and 31, Beavin discloses, "a method for performing database operations" as SQL provides tables operations with which users can request database information and form one or more new tables out of the operation results, (see col. 1, lines 25-27), "reading a first plurality of elements of a first query from a first set of one or more query element tables" as generation of the query plan and selection of an access path involves processor consideration of both the available access paths 'indexes, sequential reads, and system-held statistics on the data to be accessed 'the size of the table, the number of distinct values in a particular column to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers (see col. 10, lines 50-64), "the first plurality of elements and the one more query element tables comprising at least one of a query language command and a command argument" as the SQL processor considers the available access paths to the data and considers system statistics on the data to be accessed to select what it considers to

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be the most efficient access path to evaluate the query and retrieve the results, in which considering the available access paths, the processor checks table indexes and sequential read operations needed, (see cols. 1-2, lines 61-2). Further, in column 1, lines 25-29, Beavin discloses SQL provides table operations with which users can request database information and form one or more new tables out of the operation results, data from multiple tables or views, in which can be linked to perform complex sets of table operations with a single statement; and

“executing the first query string to retrieve results from one or more source data tables” as wherein the query processor executed step of receiving comprises the steps of detecting a parameter of the query that indicates an access path will be specified by the user; and retrieving a data table that specifies the access path desired by the user, (see col. 15, lines 21-26), and see column 6, lines 39-50. Beavin does not explicitly disclose steps of assembling a query string from the first plurality of elements, the query string comprising a database query command to be executed by a database search engine. However, Suganuma discloses steps of providing a database search system comprising an attribute information database in which there have been stored a plurality of attribute information tables for storing attribute information in association with search items (see col. 3, lines 32-38), and column 3, lines 52-67. It would have been obvious to one ordinary skill in the art to modify the combined teachings of Beavin and Suganuma with assembling a query string from the first plurality of elements, the query string comprising a database query command to be executed by a database search engine. Such modification would allow the teachings of Beavin and Suganuma to provide a plurality of attribute information tables can be stored in the attribute information database, (see col. 2, lines 37-38).



As per claims 2 and 17, Beavin discloses, “wherein the step of reading a first plurality of elements includes the sub-steps of reading a name of a second query element table from a first query element table” as the system statistics considered in choosing from available access paths include statistics on the size of tables, the number of distinct values in columns of tables, (see col. 2, lines 3-6); and

“reading a plurality of arguments for the query string from the second table query element” as sequential read operations needed, and the like to determine how it will retrieve data, the system statistics considered in choosing from available access paths include statistics on the size of tables, the number of distinct values in columns of tables, (see col. 2, lines 1-6).

As per claims 3 and 18, Beavin discloses, “wherein the step of assembling the query string includes the sub-step of assembling a query string that includes a first query language command and the plurality of arguments”, (see col. 1, lines 33-35).

As per claims 4, 19 and 22, Beavin discloses, “wherein the step of reading a first plurality of elements of a first query from the first set of one or more query element tables further includes the sub-step of reading one or more names corresponding to one or more source data tables from the first query element table”, (see col. 2, lines 1-6).

As per claims 5 and 20, Beavin discloses, “wherein the step of reading a plurality of arguments for the first query language command from the second query element table further

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includes the sub-step of reading a plurality of names of columns of the one or more source data tables from the second query element table as generation of the query plan and selection of an access path involves processor consideration of both the available access paths 'indexes, sequential reads, and system-held statistics on the data to be accessed 'the size of the table, the number of distinct values in a particular column, in which to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers, the selected query plan can be displayed to the user in response to the inclusion of the explain function in the user interactive commands, (see col. 10, lines 50-64).

As per claims 6 and 21, Beavin discloses, "wherein the step of assembling the query string includes the sub-step of concatenating together a first plurality of elements that include the name of the one or more source data tables and the plurality of names of columns" as another operation permitted by SQL is the "JOIN" operation, which concatenates all or part of two or more tables to create a new resulting table, and then performing a JOIN of that data after a SELECT operation to retrieve employee names and job titles from another table, (see col. 1, lines 30-35).

As per claim 7, Beavin discloses, "reading a second query language command from the first query element table", (see col. 10, lines 50-64).

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As per claim 8, Beavin discloses, “reading a plurality of names of columns of a target data table from the second query element table” as sequential read operations needed, and the like to determine how it will retrieve data, the system statistics considered in choosing from available access paths include statistics on the size of tables, the number of distinct values in columns of tables, (see col. 2, lines 1-6).

As per claims 9 and 24, Beavin discloses, “wherein the step of assembling the query string includes the sub-step of concatenating together a second plurality of elements that include the second query language command and the plurality of names of columns of the target data table” as another operation permitted by SQL is the “JOIN” operation, which concatenates all or part of two or more tables to create a new resulting table, and then performing a JOIN of that data after a SELECT operation to retrieve employee names and job titles from another table, (see col. 1, lines 30-35).

As per claims 10, 25 and 32, in addition to claim 1, Beavin further discloses “assembling a data base table storage command string from the second plurality of elements” as another operation permitted by SQL is the ‘JOIN’ operation, which concatenates all or part of two or more tables to create a new resulting table, (see col. 1, lines 33-35); and “executing the data base table storage command string in order to modify a target data table”, (see col. 8, lines 26-32).

As per claims 11 and 26, Beavin discloses, “wherein said storage command string is Structured Query Language UPDATE command string”, (see col. 12, 61-63 lines 15-16).

As per claims 12 and 27, Beavin discloses, “wherein said storage command string is Structured Query Language INSERT command string”, (see col. 9, lines 42-61).

As per claims 13 and 28, the limitations of claims 13 and 28 are rejected in the analysis of claim 1, and these claims are rejected on that basis.

As per claims 14 and 29, Beavin discloses, “wherein said second plurality of elements contain data used to specify the location in which data elements are to be stored in the target data table”, (see col. 9, lines 42-58).

As per claims 15 and 30, Beavin discloses, “executing said storage command string so as to cause all or a part of said source data set to be stored”, (see col. 8, lines 26-32).

As per claim 23, Beavin discloses, “wherein the step of reading a plurality of arguments for the query language command from the second table includes the sub-step of reading a plurality of names of columns of a target data table from the second query element table” as generation of the query plan and selection of an access path involves processor consideration of both the available access paths ‘indexes, sequential reads, and system-held statistics on the data to be accessed ‘the size of the table, the number of distinct values in a particular column to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information

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that is conventionally available to SQL optimizers, the selected query plan can be displayed to the user in response to the inclusion of the explain function in the user interactive commands, (see col. 10, lines 50-64).

As per claim 33, in addition to claim 1, Beavin discloses, “a data processing system comprising: means for storing one or more data tables” as SQL provides tables operations with which users can request database information and form one or more new tables out of the operation results, (see col. 1, lines 25-27), “means for reading a first plurality of elements of a first query from a first set of one or more query element tables” as generation of the query plan and selection of an access path involves processor consideration of both the available access paths ‘indexes, sequential reads, and system-held statistics on the data to be accessed ‘the size of the table, the number of distinct values in a particular column to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers (see col. 10, lines 50-64), “the first plurality of elements and the one more query element tables comprising at least one of a query language command and a command argument” as the SQL processor considers the available access paths to the data and considers system statistics on the data to be accessed to select what it considers to be the most efficient access path to evaluate the query and retrieve the results, in which considering the available access paths, the processor checks table indexes and sequential read operations needed, (see cols. 1-2, lines 61-2). Further, in column 1, lines 25-29, Beavin discloses SQL provides table operations with which users can request database information and form one or more new

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tables out of the operation results, data from multiple tables or views, in which can be linked to perform complex sets of table operations with a single statement; and

“means for executing the first query string to retrieve results from one or more source data tables” as wherein the query processor executed step of receiving comprises the steps of detecting a parameter of the query that indicates an access path will be specified by the user; and retrieving a data table that specifies the access path desired by the user, (see col. 15, lines 21-26).

As per claim 34, in addition to claim 25, Beavin discloses, “means for reading a second plurality of elements of a query from a second set of one or more tables” as generation of the query plan and selection of an access path involves processor consideration of both the available access paths ‘indexes, sequential reads’ and system-held statistics on the data to be accessed ‘the size of the table, the number of distinct values in a particular column’ to choose what the RDBMS processor considers to be the most efficient access path for the query, the selection of the most efficient access path utilizes query, database and system information that is conventionally available to SQL optimizers, (see col. 10, lines 50-59). Further, in column 1, lines 25-29, Beavin discloses SQL provides table operations with which users can request database information and form one or more new tables out of the operation results, data from multiple tables or views, can be linked to perform complex sets of table operations with a single statement;

“means for assembling a data base table storage command string from the second plurality of elements” as another operation permitted by SQL is the ‘JOIN’ operation, which

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concatenates all or part of two or more tables to create a new resulting table, (see col. 1, lines 33-35).

***Prior Art***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,009,422 issued to Ciccarelli

U.S. Patent No. 6,629,091 issued to Miura et al.

U.S. Patent No. 6,516,312 issued to Kraft et al.

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### CONTACT INFORMATION

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B Fleurantin whose telephone number is 703-308-6718. The examiner can normally be reached on 7:30-6:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John B Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jean Bolte Fleurantin

April 22, 2004



SHAHID ALAM  
PRIMARY EXAMINER